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Hiring Team
Samsung
IMEX Group
Samsung Research

Dear Hiring Team,

I am writing to express my strong interest in the Machine Learning Intern position within the Immersive Experience (IMEX) group at Samsung. As a Ph.D. candidate at the University of Oklahoma specializing in Transformer architectures and multi-agent systems, I have extensive experience bridging the gap between high-level research and production-ready code. My background in developing parameter-efficient models and scalable vision systems aligns with Samsung's mission to deliver immersive mobile experiences on Galaxy devices.

My technical profile directly supports the core responsibilities of the IMEX team:

- **Research implementation & paper-to-code:** I transform theoretical research into functional code, as demonstrated by my work developing transformer-based architectures for irregular spatio-temporal datasets. I recently achieved a $13\times$ improvement over classical baselines by designing a parameter-efficient neural approach (approximately 2.5M parameters), showcasing my ability to optimize models for performance.
- **Computer vision & generative AI:** My experience with CNNs and U-Net models includes 95% accuracy for satellite-based hotspot detection and 99% accuracy in document structure recognition. My Ph.D. research also involves attention-driven latent belief models and diffusion-based generative modeling, which aligns with next-generation AR Emoji and 3D character development.
- **Production-grade engineering:** I am proficient in Python and frameworks such as TensorFlow and Keras. I build robust data pipelines using Pandas, Xarray, and NetCDF, and I routinely run training and evaluation workflows at scale on HPC infrastructure.
- **System optimization & evaluation:** I prioritize reproducibility and benchmarking, and I have built evaluation harnesses with controlled ablations and performance tracking. This profiling mindset supports evaluating ML models on mobile hardware to ensure a seamless user experience.

I am eager to apply my technical rigor and curiosity to help Samsung push the boundaries of generative AI and mobile technology. I am on track to graduate by Summer 2027 and am available to contribute to the IMEX team's innovative projects.

Thank you for your time and consideration. I look forward to the possibility of discussing how my research in learning-based decision systems can contribute to Samsung's mobile ecosystem.

Sincerely,

Vishnu Kadiyala

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